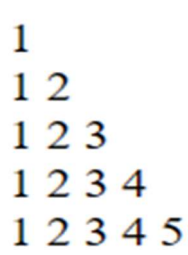# *Assignment 3*

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Assignment 3</title>
</head>
<body>
    <?php
        //Question 1 – Pattern 1
        for ($i = 1; $i < 6; $i++) {
            for ($j = 1; $j <= $i; $j++)
                echo "$j\n";
            echo "<br>";
        }
```
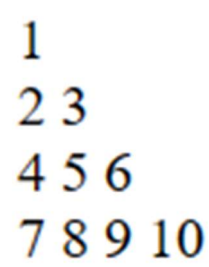
```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

```
        //Question 2 - Pattern 2
        $c = 1;
        for ($i = 1; $i < 5; $i++) {
            for ($j = 1; $j <= $i; $j++)
                echo $c++."\n";
            echo "<br>";
        }
```

```
1
2 3
4 5 6
7 8 9 10
```

```
        //Question 3 - Factorial of a number
        $n1 = 5; $f = 1;
        for (; $n1 > 0; $n1--)
            $f *= $n1;
        echo $f   //120
```

```
        //Question 4 - Reverse a string
```

```php
$s1 = "Hello"; $s2 = "";
for ($i = strlen($s1) - 1; $i >= 0; $i--)
   $s2 .= $s1[$i];
echo $s2;   //olleH



//Question 5 - Area of rectangle, square & circle
$l = 6.6; $b = 5.4; $s = 4.9; $r = 8; define("PI", 3.14);
function rec($l, $b) {
   echo "Area of rectangle: ".$l * $b;
}
function sq($s) {
   echo "Area of square: ".$s ** 2;
}
function cir($r) {
   echo "Area of circle: ".PI * $r ** 2;
}
rec($l, $b);   //Area of rectangle: 35.64
sq($s);       //Area of square: 24.01
cir($r);      //Area of circle: 200.96



//Question 6 - Count the number of 1's in binary representation of a number using bitwise '&'
$n = 7; $c = 0;
for (; $n != 0 ; $n /= 2)
    if ($n & 1)
       $c++;
echo $c;    //3



//Question 7 - Print odd number within range
$d = 10; $e = 21;
for (; $d <= $e; $d++)
   if ($d & 1)
      echo $d."\n";          //11 13 15 17 19 21
```

```php
//Question 8 - Count the number of uppercase letters in a string
$s = "hAlLoWeEn"; $c = 0;
for ($i = 0; $i  < strlen($s); $i++)
    if (ord($s[$i]) >= 65 AND ord($s[$i]) <= 90)
        $c++;
echo $c;     //4
```

```php
//Question 9 - Pattern 3
for ($i = 1; $i < 4; $i++) {
    for ($j = 2; $j >= $i; $j--)
        echo "   ";
    for ($j = 1; $j <= $i; $j++)
        echo "*\n";
    echo "<br>";
}
```

```
        ❋

      ❋  ❋

    ❋  ❋  ❋
```

```php
//Question 10 - Implicit & Explicit conversion
$a = 56; $b = 12;
$c = $a / $b;
echo $c;        //4.6666667(Implicit)
echo (int)$c;     //4(Explicit)
```

```php
// Question 11 - Simple Interest
 $p = 10000; $r = 3; $t = 4;
 $si = ($p * $r * $t)/ 100;
 echo $si;          //1200
```

```php
// Question 12 - Day of the week using switch case
 $day = 5;
 switch ($day) {
   case 1:
     echo "Its Sunday";
     break;
```

```php
    case 2:
        echo "Its Monday";
        break;
    case 3:
        echo "Its Tuesday";
        break;
    case 4:
        echo "Its Wednesday";
        break;
    case 5:              //Its Thursday
        echo "Its Thursday";
        break;
    case 6:
        echo "Its Friday";
        break;
    case 7:
        echo "Its Saturday";
        break;
    default:
        echo "Invalid number";
}


// Question 13 - Swap two numbers
$a = 5; $b = 7;
echo "Before swap, A: $a B: $b";    //Before swap, A: 5 B: 7
$a = $a + $b;
$b = $a - $b;
$a = $a - $b;
echo "<br>After swap, A: $a B: $b"; //After swap, A: 7 B: 5


// Question 14 - Sum of digits of a given numbers
$n = 251; $s = 0;
for (; $n > 0; $n /= 10)
    $s += $n % 10;
echo $s;            //8
```

```php
// Question 15 - Prime number between 1 & 50
$a = 2; $b = 50;
for (; $a < $b; $a++) {
    $isPrime = true;
    for ($i = 2; $i <= $a/2; $i++)
        if (!($a % $i)) {
            $isPrime = false;
            break;
        }
    if ($isPrime)
        echo $a."\n";  //2 3 5 7 11 13 17 19 23 29 31 37 41 43 47
}
?>
```
</body>
</html>